



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,394	03/07/2002	Atsushi Yokouchi	Q68888	9620
7590 11/22/2004 SUGHRUE MION, PLLC 2100 Pennsylvania Avenue, NW Washington, DC 20037-3213			EXAMINER JOHNSON, JERRY D	
			ART UNIT 1764	PAPER NUMBER

DATE MAILED: 11/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/091,394

Applicant(s)

YOKOUCHI ET AL.

Examiner

Jerry D. Johnson

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on September 15, 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on July 28, 2004 has been entered.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 4-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokouchi et al. in view of Heimann et al.

Yokouchi et al., U.S. Patent 5,840,666, teach a rolling bearing having sealed therein a grease composition comprising a base oil, a urea thickener, and an inorganic filler having an average particle size of not greater than 2 micrometers (column 3, lines 15-19). The inorganic filler is preferably used in an amount of 0.05 to 15% by weight (column 4, lines 21-23). The base oil preferably has a kinetic viscosity of 10 to 400 mm<sup>2</sup>/sec, particularly 20 to 250 mm<sup>2</sup>/sec, especially 40 to 150 mm<sup>2</sup>/sec at 40°C (column 5, lines 53-60). The grease composition can further contain one or more additives in a total amount of up to 20% by weight (column 6, lines 35-39). While Yokouchi et al. teach the addition of further additives, Yokouchi et al. differ from the instant claims in not teach the addition of a pH adjustor.

Heimann et al., U.S. Patent 6,010,984, teach lubricant and grease compositions which imparts corrosion and microbial resistance, and a high dropping point (column 2, lines 12-15). The pH of the grease can be tailored to be compatible with the metal surface which is contacted with the grease or gel (column 5, lines 59-60). The grease will typically have a pH that ranges from about 7 to about 14 (column 6, lines 2-3). The addition of conventional additives is taught in column 8, lines 5+.

A person having ordinary skill in the art, armed with the disclosure of Heimann et al., would have found it obvious to add a pH adjustor to the grease composition of Yokouchi et al. in order to adjust the pH to "about 7 to about 14" and tailor the grease to be compatible with the metal surface which is contacted with the grease with a reasonable expectation of enhancing the corrosion resistance of said composition.

Claims 1 and 4-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naka et al. in view of Heimann et al. and Yokouchi et al.

On page 1 of the specification, under the heading Technical Field, applicants disclose

This invention relates to a rolling bearing and particularly a rolling bearing which is used under such a condition that water may seep in the lubricant or the bearing is affected by high temperature, high-speed rotation or vibrations and is suitable to electric parts and accessories of an automobile engine such as an alternator. (Emphasis added).

Column 1, lines 5-20 of Naka et al., U.S. Patent 5,728,659, teach

The present invention relates to a grease composition for rolling bearings. More particularly, it relates to a grease composition employed for rolling bearings in electrical components and accessory devices for automotive vehicles, such as alternators, electromagnetic clutches for car air conditions, idle pulleys, electric fan motors, or the like. (Emphasis added).

Naka et al., U.S. Patent 5,728,659, teach a grease composition for a rolling bearing comprising 10 to 60 parts by weight of a mixture of diurea compounds as a thickener based on

Art Unit: 1764

100 parts by weight of a base oil (column 2, lines 13-44). The base oil used in the grease is not particularly limited, and any oil used as a base oil for a lubricating oil may be used (column 5, lines 9-11). Base oils having a kinematic viscosity of preferably 40 to 400 mm<sup>2</sup>/s, more preferably 60 to 250 mm<sup>2</sup>/s, most preferably 80 to 150 mm<sup>2</sup>/s at 40°C is preferred (column 5, lines 11-18). The grease composition may optionally contain publicly known additives in order to further improve its properties (column 7, lines 31-33). These additives may be used alone or as a combination of two or more kinds. The amount of the additives to be added is not particularly limited, but usually not more than 20% by weight of the grease composition (column 7, lines 42-47). Naka et al. differ from the instant claims in not teaching the addition of a pH adjustor and inorganic particles having an average particle size of 2 micrometers or less.

Heimann et al., U.S. Patent 6,010,984, teach lubricant and grease compositions which imparts corrosion and microbial resistance, and a high dropping point (column 2, lines 12-15). The pH of the grease can be tailored to be compatible with the metal surface which is contacted with the grease or gel (column 5, lines 59-60). The grease will typically have a pH that ranges from about 7 to about 14 (column 6, lines 2-3). The addition of conventional additives is taught in column 8, lines 5+.

Yokouchi et al., U.S. Patent 5,840,666, teach a rolling bearing having sealed therein a grease composition comprising a base oil, a urea thickener, and an inorganic filler having an average particle size of not greater than 2 micrometers (column 3, lines 15-19). The inorganic filler reinforces the gel structure of the thickener and improves the film-forming properties of the grease (column 2, lines 57-62). The inorganic filler is not particularly limited as long as it is capable of reinforcing the gel structure formed of a thickener (column 3, lines 38-40). Specific

Art Unit: 1764

inorganic filler are disclosed in column 3, lines 43-48). The inorganic filler is preferably used in an amount of 0.05 to 15% by weight (column 4, lines 21-23).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to add a pH adjustor as taught by Heimann et al. to the grease composition of Naka et al. in order to adjust the pH to "about 7 to about 14" and tailor the grease to be compatible with the metal surface which is contacted with the grease with a reasonable expectation of enhancing the corrosion resistance of said composition. Additionally, it would have been obvious to add an inorganic filler as taught by Yokouchi et al in order to reinforce the gel structure and film-forming properties of the grease composition.

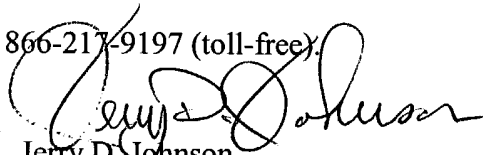
Applicant's arguments with respect to claims 1 and 4-17 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry D. Johnson whose telephone number is (571) 272-1448. The examiner can normally be reached on 6:00-3:30, M-F, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1764

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jerry D. Johnson  
Primary Examiner  
Art Unit 1764

jdj